

E. G. Russell,

Mechanical Movement.

No. 112,498.

Patented Mar. 7. 1871.

Fig. 1.

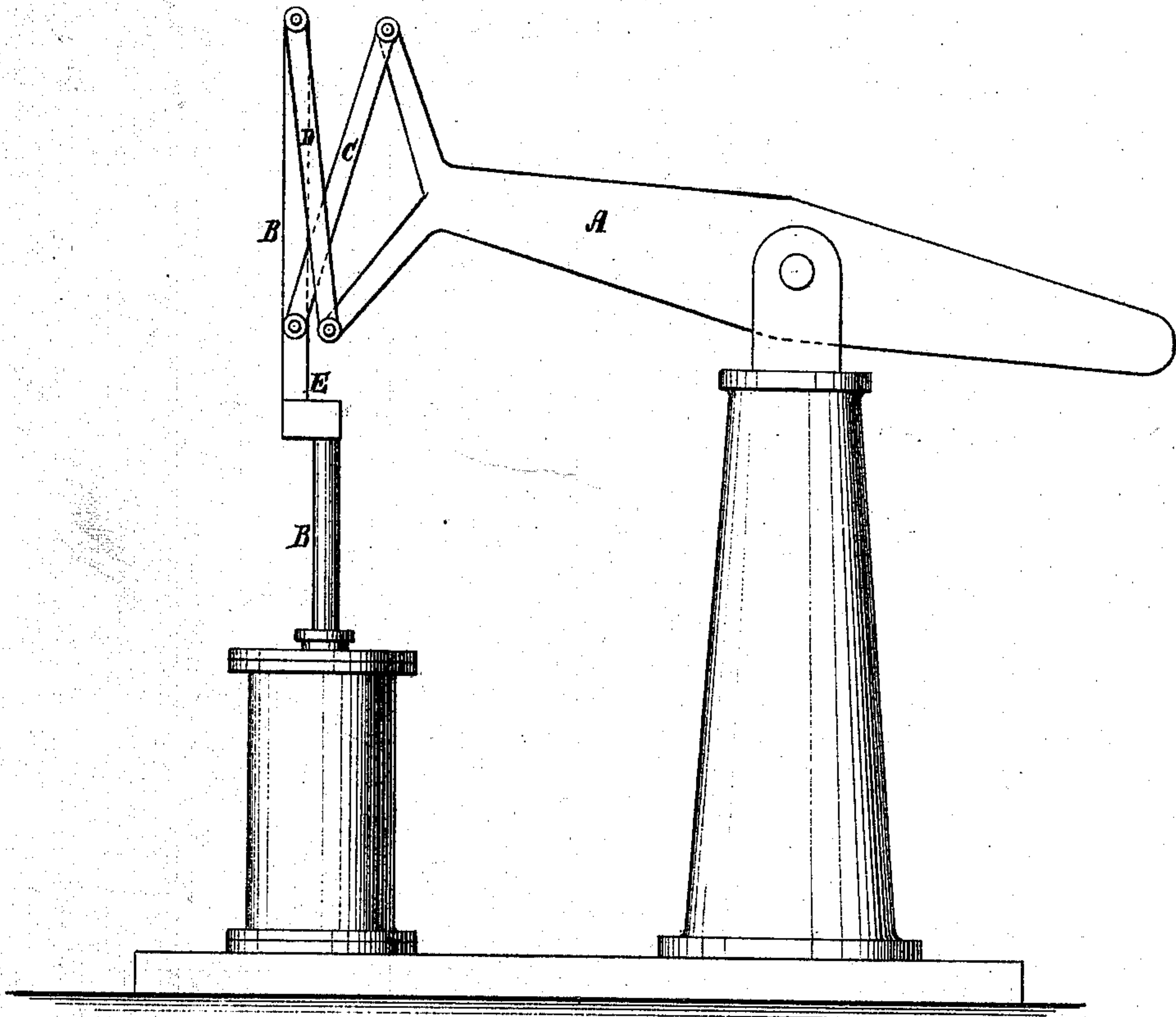
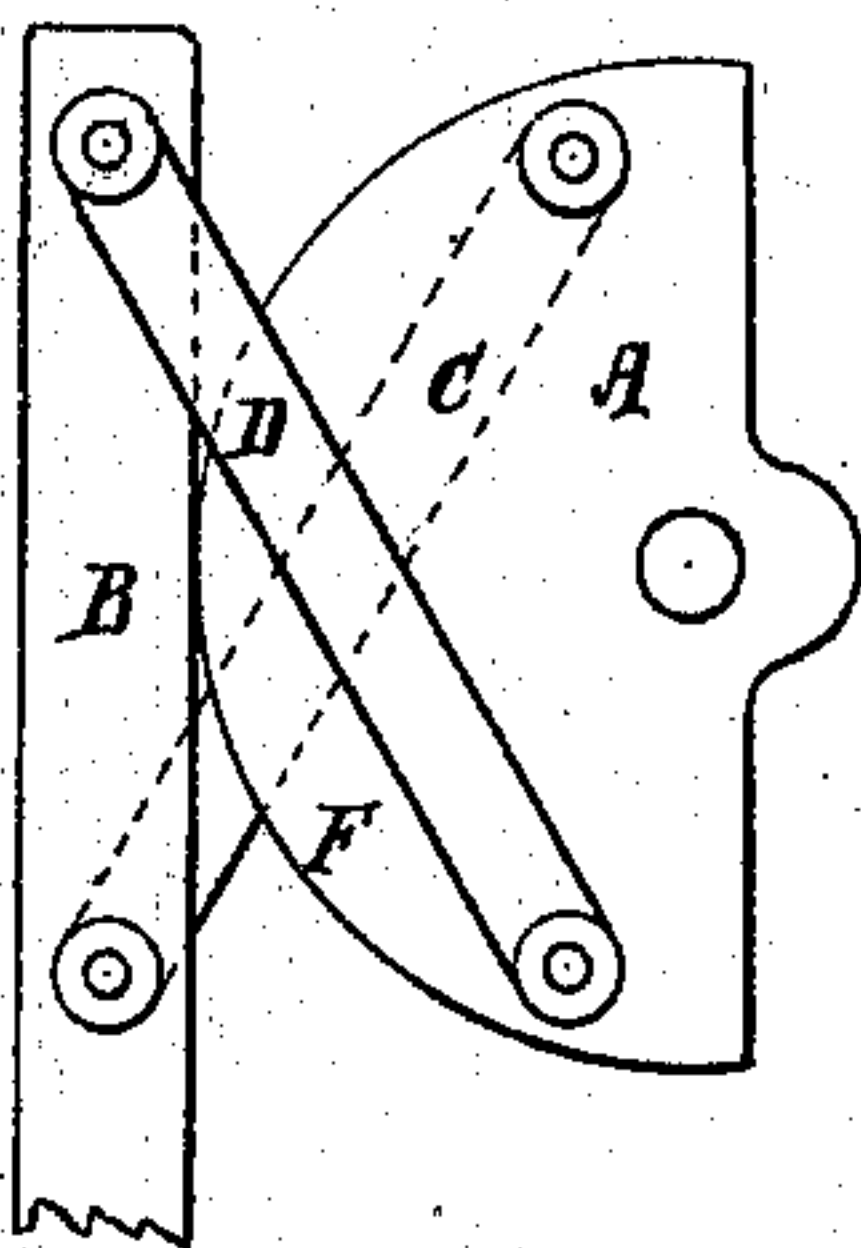


Fig. 2.



Witnesses:

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EDWARD G. RUSSELL, OF RAVENNA, OHIO.

Letters Patent No. 112,498, dated March 7, 1871.

IMPROVEMENT IN MECHANICAL MOVEMENTS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EDWARD G. RUSSELL, of Ravenna, in the county of Portage and State of Ohio, have invented a new and improved Mechanical Movement; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in apparatus for imparting a reciprocating motion from an oscillating device, or *vice versa*; and

It consists in a connection of the reciprocating and oscillating devices by rods, arranged in a manner by which the tendency of one rod to force the reciprocating bar out of its right line will be counteracted by the other.

Figure 1 is a side elevation of my improved apparatus; and

Figure 2 is a side elevation of a modification of the same.

Similar letters of reference indicate corresponding parts.

A represents an oscillating beam, and B a reciprocating rod, which are connected together by the two connecting-rods C D, which are arranged to cross each other, the one, C, being connected at the upper end to the beam A, and at the lower end to the rod B, and the one, D, being connected at the upper end to the

reciprocating rod B, and at the lower end to the beam.

This connection causes the reciprocating rod to work in a right line, for the tendency of one connecting-rod to thrust it out of said line is opposed by the other; thereby the power commonly expended by these lateral thrusts, incident upon the use of one connecting-rod only, is saved.

The reciprocating rod may either be driven by the beam or the beam may be driven by it.

The said reciprocating rod has an offset, E, intended to bring the weight or point of resistance into a vertical line equidistant between the vertical lines of the pivot-joints of the rods C D with the rod B and the beam, which causes a more even and uniform motion than would otherwise be the case.

I propose in some cases to provide the beam with a curved end, F, struck from the center of motion, for the rod B to work against, for making the motion more smooth and even.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The combination of the oscillating beam A and crossed connecting-rods C D with the reciprocating rod B, substantially as and for the purpose specified.

Witnesses: EDWARD G. RUSSELL.

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